

# **EXHIBIT J**



# Neuropsychological & Family Therapy Associates, P.C.

*Forensic, Psychological, and Neuropsychological Evaluations  
Child, Adolescent and Adult Psychiatry  
Individual, Family, and Couples Psychotherapy*

## REPORT OF NEUROPSYCHOLOGICAL EVALUATION

**Clinic Director**  
Ronald S. Federici, Psy.D.

Name of Patient: Roman Alexander Harshaw

**Manager**  
Kathleen R. Tucker

Date of Birth: April 2, 2002

Date of Examination: June 14, 15, and 16, 2006

**Clinical Neuropsychology**  
Ronald S. Federici, Psy.D.  
William D. Ling, Ph.D.

### TESTS ADMINISTERED:

**Neurobehavioral Therapists**  
Nadya Molina, M.Ed.  
Leslie Smith, M.Ed., BCBA

Diagnostic Clinical Interview  
Stanford-Binet Intelligence Scale: Fourth Edition  
Battelle Developmental Inventory: Second Edition  
Vineland Adaptive Behavior Scales: Interview Edition Expanded Form  
Childhood Autism Rating Scale (Examiner and Parent Administered)  
Gilliam Autism Rating Scales (Examiner and Parent Administered)  
Wide Range Assessment of Visual-Motor Abilities  
Beery-Buktenica Developmental Test of Visual-Motor Integration (VMI)  
Preschool Language Scale-Fourth Edition  
Test of Language Development - Primary: Third Edition (TOLD-P:3)  
Peabody Picture Vocabulary Test- Third Edition  
Token Test for Children  
Developmental Tasks for Kindergarten Readiness  
Test of Auditory-Perceptual Skills - Revised (TAPS-R)  
NEPSY: A Developmental Neuropsychological Assessment  
Draw-A-Person Test  
Children's Apperception Test  
Child Neuropsychological History  
Conners' Rating Scales for Attention Deficit Hyperactivity Disorder  
Attention Deficit Hyperactivity Disorder Test  
Differential Test of Conduct and Emotional Problems  
Achenbach Child Behavior Checklist  
Sensory Profile  
Review of Records  
Intensive 10-Hour Family Neurobehavioral Therapy (Nadja Molina, Neurodevelopmental Therapist)

**Clinical Psychotherapy**  
Nicole Cornthwaite, L.M.F.T.

**Auditory Processing/Speech  
Language/Audiology**  
Dr. Jay Lucker

**Research Specialist**  
Dr. Deanna Linville

**Administrative Assistant**  
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**REASON FOR REFERRAL:**

Roman Alexander Harshaw was referred for comprehensive neuropsychological evaluation upon the request of his attending Pediatrician, Dr. Holland.

Parents have significant concerns regarding Roman's overall intellectual-cognitive; neurodevelopmental; and, primarily social-emotional functioning.

**BACKGROUND INFORMATION:**

Roman Alexander Harshaw is a 4 year, 2 month-old preschool student who resides at home with his two adoptive parents: Julie, age 38, who is a realtor; and William, age 42, who is a curator.

Roman was adopted from an orphanage in Russia at the age of 22 months-old through Bethany Christian Services (adoption completed in February of 2004).

The Harshaws have two biological children: Daniel, age 9, and Grace, age 1½.

**REVIEW OF RECORDS:**

In reviewing Roman's overall medical and psychoeducational records, he has been carefully followed by developmental pediatricians, pediatric neurologists, and a geneticist who have strongly raised questions regarding an alcohol related neurodevelopmental disorder.

Roman has very small growth parameters as his height is at approximately the 10<sup>th</sup>- 20<sup>th</sup> percentile; weight below the 3<sup>rd</sup> percentile; and head circumference below the 2<sup>nd</sup> percentile. All of these growth parameters clearly indicate microcephaly which are hallmark characteristics in children who have Fetal Alcohol Spectrum Disorders.

Additionally, Roman has been evaluated and felt to have a severe attention deficit hyperactivity disorder. Roman has been tried on Metadate, Concerta, Adderall, and Zoloft. All of these medications did not yield significant positive results as Roman showed many "rebound effects" in terms of increased agitation and mood lability.

In reviewing Roman's overall records provided by parents, adoption records were very incomplete and do not bring forward any of the information regarding Roman's 22 months of living in a Russian orphanage. The information was actually redacted with the majority of developmental information being "left out" and not provided to the parents at the time of adoption.

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Roman's initial medical evaluation was completed by Frank Aiello, M.D., Neurologist at Children's Hospital of the King's Daughters in Norfolk, Virginia. In Dr. Aiello's evaluation, Roman was 3½ years-old at the time of assessment and felt to have a significant ADHD pattern and was assessed as being a candidate for a medication trial. Dr. Aiello followed Roman carefully for medications and also recommended that he receive special education interventions as well as family therapy.

School records have indicated that Roman shows significant speech and developmental delays. A preschool team assessment report completed in June of 2005 indicated that Roman was a youth who was functioning within the low average range based on the Wechsler Preschool and Primary Scale of Intelligence - Third Edition.

More specifically, Roman obtained the following scores:

<u>Subtest</u>	<u>Scaled Scores</u>	
Receptive Vocabulary	9	
Information	7	
Block Design	7	
Object Assembly	7	
Verbal Scale IQ Score	88	Low Average Range
Performance Scale IQ Score	82	Low Average Range
Full Scale IQ Score	83	Low Average Range

Roman also showed many indications of ADHD based on diagnostic rating scales.

Roman was also administered the Battelle Developmental Inventory: Second Edition (partial) and obtained an Adaptive Developmental Quotient of 98 (average range); a Motor Developmental Quotient of 100 (average range).

While Roman was showing adequate basic motor and sensory abilities, he had significant problems in overall speech and language.

Roman was administered the Preschool Language Scale-Fourth Edition and obtained an Auditory Comprehension Score of 81 (low average range); an Expressive Communication Standard Score of 77 (below average range); and a Total Language Score of 77 (below average range).

All of these scores clearly indicated that Roman showed weaknesses in both receptive and expressive skills with major problems in overall articulation and oral expressive skills, particularly intelligibility.

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Speech and language therapy focused on improving Roman's overall word retrieval and articulation.

Roman's Individualized Educational Program categorized him as a youth who has developmental delays with the principal focus being on his ADHD and behavioral dyscontrol. The Virginia Beach Public School District reports that Roman has a diagnosis of fetal alcohol syndrome and definitely will require special education interventional services.

An additional school psychoeducational evaluation was completed in June of 2005 which involved the Differential Ability Scale in addition to the full Wechsler Preschool and Primary Scale of Intelligence - Third Edition.

On the Differential Ability Scale, Roman obtained a Verbal Cluster of 65 (very low range); a Nonverbal Cluster of 63 (very low range); and a General Conceptual Ability Standard Score of 61 (very low range).

Roman's performance on the Wechsler Preschool and Primary Scale of Intelligence - Third Edition (older child's version) yielded the following scores:

<u>Subtests</u>	<u>Scaled Scores</u>	
Information	7	
Vocabulary	9	
Word Reasoning	5	
Block Design	5	
Matrix Reasoning	8	
Picture Concepts	6	
Coding	5	
Verbal IQ	83	Low Average Range
Performance IQ	77	Borderline Range
Full Scale IQ Score	76	Borderline Range

Based on all these findings, Roman was clearly found to have many inconsistencies in overall intellectual-cognitive abilities with gaps in receptive and expressive language in addition to both motor and non-motor based visual perceptual processing.

Roman was also administered the Behavior Assessment System for Children and found to have significant problems with behavioral control, attention, concentration, and overall self-regulation and adaptive skills.

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Based on all of these findings, Roman was recommended to continue in a special education program with his parents being advised that he will most likely qualify for a self-contained early childhood developmental program.

**CURRENT SYMPTOMS:**

In reviewing the Child Neuropsychological History Form along with the Parental Interview, Roman's parents report that he has severe attention deficit hyperactivity disorder characteristics. Roman is grossly inattentive, distractible, with poor sustained concentration in addition to gross hyperactivity and impulsivity. Parents report that Roman is just unable to "slow down" for any period of time and can also become extremely oppositional, defiant, and very destructive.

Roman has global impairments in receptive and expressive language. He has problems with comprehension, processing, in addition to expressive clarity. His speech tends to be very inarticulate in addition to rambling and tangential patterns. There is no question that Roman also shows early indications of global learning disabilities as he struggles in problem solving.

Parents report that Roman has difficulties with planning and organization, following instructions and directions, in addition to learning new tasks as he becomes very easily frustrated and quickly "shuts down".

Roman also displays multiple motor and sensory dyspraxias which are also hallmark characteristics in children who have Fetal Alcohol Spectrum Disorders. Roman still does not have left-right orientation and is very weak in fine-motor skills as he is clumsy and awkward. He has trouble with simple puzzles, Legos, and block patterns in addition to copying and writing which he is unable to complete.

Roman shows many indications of sensory integration dysfunction as he is overly sensitive to touch and noise.

From a psychological perspective, Roman's parents are overwhelmed as they report that he is aggressive, highly immature, and prone towards self-stimulating and repetitive behaviors. He will hit his head in addition to parents reporting that he will sometimes dig for worms in one position for a long period of time without interruption.

Roman can also be very destructive, impulsive, and defiant. Parents report that he is in constant motion and constantly interrupts in addition to having mood changes. Roman does not understand "cause and effect thinking" and has been dismissed from various preschool programs due to his disruptive and difficult behaviors. Roman's parents have been overwhelmed regarding his neurobehavioral and neurocognitive difficulties.

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In terms of basic attachment, Roman shows a generally poor pattern. He has cognitive deficits in addition to unpredictable behaviors. Interestingly, Roman's parents have also reported that he displays quasi-autistic patterns such as being very persistent, impulsive, and in constant motion with idiosyncratic language usage. These are all very common characteristics in children who have been known to have "post-institutional autism" based on early childhood neglect and deprivation.

**DEVELOPMENTAL HISTORY:**

In reviewing Roman's developmental history, parents were not provided with any formal Russian medical records. There was a brief pre-adoption video which did not yield any major findings as there were no medical records or developmental records provided which are all available in any Russian adoption.

There was no information provided to the adoptive parents regarding the biological parents aside from the fact that Roman was abandoned at 10-months-old and stayed in the orphanage until he was adopted at 22 months-old. Roman had very small growth parameters at the time of adoption in addition to low birth weight and microcephaly which should have been immediately reported to parents as a "risk factor" for a Fetal Alcohol Spectrum Disorder.

When Roman was adopted, he showed no speech or language patterns and showed gradual deterioration in all functioning. Roman showed severe ADHD symptoms throughout his preschool years in addition to significant speech and language and behavioral dyscontrol.

Parents state that they have tried various discipline techniques without positive results.

**DIAGNOSTIC CLINICAL INTERVIEW/MENTAL STATUS EXAMINATION:**

Roman presented with extremely small growth parameters with height and weight being well below the 10<sup>th</sup> percentile with Roman's head circumference being significantly below all growth charts and indicative of microcephaly. Additionally, Roman displayed many indications of fetal alcohol syndrome based on slightly separated eyes, smooth and elongated philtrum, in addition to significant neurocognitive and neuropsychiatric factors such as general linguistic and severe ADHD patterns.

Roman showed severe inattention, distractibility, and impulsivity to the point where he was often unmanageable and needed physical restraint. Applied Behavioral Analysis and behavior modification was necessary as Roman was in constant motion and severely distractible and impulsive.

Roman displayed limited intellectual abilities as he was confused and disorganized in his thinking and reasoning. Roman's overall language indicated major problems with comprehension and, primarily expressive skills as he was very poor in thinking, reasoning, and expressive clarity. Roman



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was often irrelevant, tangential, and fragmented with some signs of echolalia in addition to his poor articulation and word retrieval.

Roman also displayed definite oral motor dysfunction affecting his overall fluency. Roman displayed no pattern of pragmatic-semantic language skills.

Roman also displayed many indications of visual perceptual processing and nonverbal deficits as well. Roman was clumsy and awkward with his fine-motor coordination skills, bilaterally in addition to displaying multiple motor and sensory dyspraxias. Roman displayed an almost palsy-type pattern when attempting to utilize paper and pencil manipulation.

Roman's behavioral patterns indicated that he would often hit his head and stare off into space. He was impulsive and engaged in incessant and rambling chatter. He was definitely confused and disorganized and would sometimes spin objects or put his fingers in his mouth which are also hallmark characteristics of youths who have global neurological problems leading to quasi-autistic patterns.

Roman was extremely anxious with prominent mood changes which certainly contributed to his behavioral dyscontrol.

Overall, with ample parental structure and support in addition to frequent breaks and behavior modification strategies, Roman was able to complete all aspects of the neuropsychological testing.

#### **NEUROPSYCHOLOGICAL FUNCTIONING:**

The following tables are a summary of Roman's scaled scores on the Stanford-Binet Intelligence Scale: Fourth Edition; Battelle Developmental Inventory: Second Edition; Vineland Adaptive Behavior Scales: Interview Edition Expanded Form; Childhood Autism Rating Scale; Gilliam Autism Rating Scales; Wide Range Assessment of Visual-Motor Abilities; Beery-Buktenica Developmental Test of Visual-Motor Integration; Preschool Language Scale-Fourth Edition; Test of Language Development - Primary: Third Edition; Peabody Picture Vocabulary Test; Token Test for Children; Developmental Tasks for Kindergarten Readiness; Test of Auditory-Perceptual Skills - Revised; and the NEPSY: A Developmental Neuropsychological Assessment:



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**STANFORD-BINET INTELLIGENCE SCALE: FOURTH EDITION:**

**Verbal Reasoning** **Standard Age Score**

Vocabulary	50
Comprehension	43
Absurdities	39
Verbal Relations	—

**Verbal Reasoning SAS 86 (Low Average Range)**

**Abstract/Visual Reasoning**

Pattern Analysis	41
Copying	44
Matrix	—
Paper Folding and Cutting	—

**Abstract/Visual Reasoning SAS 83 (Low Average Range)**

**Quantitative Reasoning**

Quantitative	49
Number Series	—
Equation Building	—

**Quantitative Reasoning SAS 98 (Average Range)**

**Short-Term Memory**

Bead Memory	45
Memory For Sentences	40
Memory For Digits	—
Memory For Objects	—

**Short-Term Memory SAS 82 (Low Average Range)**

**Overall Test Composite 85 (Low Average Range)**

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**BATTELLE DEVELOPMENTAL INVENTORY: SECOND EDITION**

<u>Subtests</u>	<u>Developmental Quotient</u>	<u>Percentile Rank</u>
Adaptive	73	4 Below Average Range
Personal-Social	76	5 Below Average Range
Communication	66	1 Below Average Range
Motor	70	2 Below Average Range
Cognitive	64	1 Below Average Range
BDI-2 Total	62	1 Below Average Range

**VINELAND ADAPTIVE BEHAVIOR SCALES: INTERVIEW EDITION**  
**EXPANDED FORM**

<u>Sub-Domain</u>	<u>Standard Score</u>	<u>National Percentile</u>	<u>Adaptive Level</u>	<u>Age Equiv.</u>
Communication Domain	69	2	Low	2 yr. , 2 mo.
Daily Living Skills Domain	66	1	Low	2 yr. , 5 mo.
Socialization Domain	64	1	Low	1 yr. , 9 mo.
Motor Skills Domain	60	0.4	Low	2 yr., 7 mo.
Adaptive Behavior Composite	60	0.4	Low	2 yr., 3 mo.

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**CHILDHOOD AUTISM RATING SCALE (Examiner Administered)**

<b><u>Subtest</u></b>	<b><u>Scores 1, 2, 3, &amp; 4 in Level of Severity</u></b>	
Relating to People	3	
Imitation	1	
Emotional Response	2	
Body Use	2	
Object Use	2	
Adaptation to Change	2	
Visual Response	3	
Listening Response	3	
Taste, Smell, and Touch Response and Use	1	
Fear and Nervousness	1	
Verbal Communication	3	
Non-Verbal Communication	3	
Activity Level	4	
Level and Consistency of Intellectual Response	2	
General Impressions	2	(Mild Autism)
Total Score	34	(Mildly Autistic) (Borderline Traits)

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**CHILDHOOD AUTISM RATING SCALE**

**(Parent Administered)**

<b><u>Subtest</u></b>	<b><u>Scores 1, 2, 3, &amp; 4 in Level of Severity</u></b>	
Relating to People	3	
Imitation	2	
Emotional Response	3	
Body Use	3	
Object Use	2	
Adaptation to Change	2	
Visual Response	2	
Listening Response	4	
Taste, Smell, and Touch Response and Use	2	
Fear and Nervousness	2	
Verbal Communication	3.5	
Non-Verbal Communication	1	
Activity Level	4	
Level and Consistency of Intellectual Response	4	
General Impressions	2	(Mild Autism)
Total Score	39.5	(Moderately Autistic Range)

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<u>GILLIAM AUTISM RATING SCALE</u>		
<u>(Examiner Administered)</u>		
Subtest	Standard Score	Percentile
Stereotyped Behaviors	9	37
Communication	12	75
Social Interaction	7	16
Developmental	8	25
Autism Quotient	93	32 (Average Probability of Autism)

<u>GILLIAM AUTISM RATING SCALE</u>		
<u>(Parent Administered)</u>		
Subtest	Standard Score	Percentile
Stereotyped Behaviors	8	25
Communication	9	37
Social Interaction	8	25
Developmental	12	75
Autism Quotient	95	37 (Average Probability of Autism)

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**WIDE RANGE ASSESSMENT OF VISUAL MOTOR ABILITIES (WRAVMA)**

<b><u>Subtests</u></b>	<b><u>Standard Score</u></b>	<b><u>Percentile Score</u></b>
Visual-Motor	66	1 Below Average Range
Visual-Spatial	69	2 Below Average Range
Fine Motor	80	9 Low Average Range
VMA Composite	61	0.9 Below Average Range

**BEERY-BUKTENICA DEVELOPMENTAL  
 TEST OF VISUAL-MOTOR INTEGRATION (VMI)**

	<b><u>VMI</u></b>	<b><u>Visual</u></b>	<b><u>Motor</u></b>
Standard Scores	60 (Below Average Range)	53 (Below Average Range)	47 (Below Average Range)
Scaled Scores	2	1	1
Percentiles	0.8	0.1	.04
Age Scores	2 yr., 0 mo.	<3 yr., 0 mo.	<3 yr., 0 mo.



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**PRESCHOOL LANGUAGE SCALE - FOURTH EDITION**

<u>Subtest</u>	<u>Standard Score</u>	<u>Percentile Rank</u>	<u>Age Equivalent</u>
Auditory Comprehension	65 (Below Average Range)	1	2 yr., 7 mo.
Expressive Communication	58 (Below Average Range)	1	2 yr., 4 mo.
Total Language Score	57 (Below Average Range)	1	2 yr., 5 mo.

**TEST OF LANGUAGE DEVELOPMENT - PRIMARY: 3<sup>RD</sup> EDITION (TOLD-P:3)**

<u>Subtests</u>	<u>Standard Score</u>	<u>Percentile</u>
Picture Vocabulary	7	16
Relational Vocabulary	5	5
Oral Vocabulary	8	25
Grammatical Understanding	5	5
Sentence Imitation	5	5
Grammatical Completion	5	5

**Supplemental**

Word Discrimination	6	9
Phonemic Analysis	4	2
Word Articulation	4	2

<u>Composites</u>	<u>Quotients</u>	<u>Percentiles</u>
Spoken Language	71	3 Below Average Range
Listening	76	5 Below Average Range
Organizing	70	2 Below Average Range
Speaking	79	8 Below Average Range
Semantics	79	8 Below Average Range
Syntax	68	1 Below Average Range

NOTE: Average Standard Score = 10

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**PEABODY PICTURE VOCABULARY TEST (PPVT)**

Standard Score	72 (Below Average Range)
Percentile Rank	3
Stanine	2
Age Equivalent	3 yr., 0 mo.

**TOKEN TEST FOR CHILDREN**

<u>Subtests</u>	<u>Age Scores</u>	<u>Grade Scores</u>
Part I	471	459
Part II	<488	<486
Part III	<490	<489
Part IV	<496	<496
Part V	<493	<493
Overall Score	486	484

NOTE: Average standard score = 500/standard deviation 5 points

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**DEVELOPMENTAL TASKS FOR KINDERGARTEN READINESS**

<b><u>Subtests</u></b>	<b><u>Rating</u></b>
Social Interaction	Below Average
Name Printing	Below Average
Body Concept (Awareness and Use)	Average
Auditory Sequencing	Below Average
Auditory Association	Below Average
Visual Discrimination	Below Average
Visual Memory	Below Average
Visual Motor	Below Average
Color Naming	Low Average
Relational Concepts	Below Average
Number Knowledge (Counting, Use, and Naming)	Below Average
Alphabet Knowledge	Below Average

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**TEST OF AUDITORY-PERCEPTUAL SKILLS - REVISED (TAPS-R)**

<u>Subtests</u>	<u>Auditory Perceptual Ages</u>	<u>Standard Scores</u>	<u>Scaled Scores</u>	<u>Percentile Ranks</u>	<u>Stanines</u>
Auditory Number Memory					
Forward	<4 yr., 0 mo.	77	5	6	2
Reversed	<4 yr., 0 mo.	87	7	19	3
Auditory Sentence Memory	<4 yr., 0 mo.	83	7	13	3
Auditory Word Memory	<4 yr., 0 mo.	79	6	8	2
Auditory Interpretation of Directions	<4 yr., 0 mo.	84	7	14	3
Auditory Word Discrimination	<4 yr., 0 mo.	55	1	1	1
Auditory Processing	<4 yr., 0 mo.	93	9	32	4
Auditory Perceptual Quotient		67			
Percentile		1	(Below Average Range)		

NOTE: Average Standard Score = 100/Average Scaled Score = 10

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**NEPSY: A DEVELOPMENTAL NEUROPSYCHOLOGICAL ASSESSMENT**

<b><u>Sub-Domain</u></b>	<b><u>Domain Score</u></b>	<b><u>Percentile Rank</u></b>
Attention/Executive	57	0.2 (Deficient Range)
Language	70	2 (Below Average Range)
Sensorimotor	70	2 (Below Average Range)
Visuospatial	69	2 (Below Average Range)
Memory	64	1 (Deficient Range)

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**INTELLECTUAL-COGNITIVE FUNCTIONING:**

Roman has been administered the younger and older version of the Wechsler Preschool and Primary Scale of Intelligence - Third Edition through the Virginia Beach Public School District. Roman's initial intellectual testing with the younger children's version of the Wechsler Preschool and Primary Scale of Intelligence - Third Edition yielded a Verbal IQ Score of 88; a Performance IQ Score of 82; and a Full Scale IQ Score of 83. All of these scores placed Roman consistently within the low average range of intelligence.

Roman was re-administered the older children's version of the Wechsler Preschool and Primary Scale of Intelligence - Third Edition in May of 2006. Roman obtained a Verbal IQ Score of 83; a Performance IQ Score of 77; and Full Scale IQ Score of 76. These scores placed Roman within the low average-borderline range with a 6-point discrepancy between measured verbal and performance sections in addition to a significant degree of variability between subtest scores in both language based and performance areas. It was very clear that Roman had significant weaknesses in both receptive and expressive language in addition to motor and non-motor based visual perceptual processing. Roman's very poor attention and concentration in addition to global developmental delays (significant neuropsychologically based processing deficits), clearly "suppressed" his overall neurocognitive scores.

Roman was administered the cross-validating Stanford-Binet Intelligence Scale: Fourth Edition and continued to obtain scores generally within the low average range. This is a relative strength for Roman as it reflects that despite significant weaknesses in receptive and expressive language in addition to attention, concentration, and overall visual perceptual processing related to his fetal alcohol syndrome, Roman is able to maintain at least low average intellectual abilities.

Roman's verbal reasoning abilities indicates basic vocabulary but definite weaknesses in comprehension, abstractive logic, and verbal reasoning in addition to significant weaknesses in short-term auditory attention, memory, and learning. Roman's oral clarity was also very weak as he has problems with word retrieval, articulation, in addition to speaking in a clear and connected manner.

Roman's abstract/visual reasoning abilities indicated definite problems with visual attention, visual discrimination, in addition to visual problem solving and visual memory. All of these weaknesses are consistent with a "nonverbal learning disorder" typically seen in children who have global developmental delays.

Roman showed a relative strength in quantitative reasoning as he was able to complete simple counting and visual matching activities related to quantitative reasoning skills. Roman certainly was not at any level of proficiency in order to complete any routine kindergarten or pre-kindergarten level task despite low average intellectual abilities.



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As Roman continues to improve and receive developmental services, it is speculated that his optimal intellectual-cognitive abilities will most certainly be higher within the low average range.

**BATTELLE DEVELOPMENTAL INVENTORY:**

Roman was previously administered only a few subtests of the Battelle Developmental Inventory which indicated adequate motor skills.

Roman was administered the entire Battelle Developmental Inventory: Second Edition and obtained an Overall Developmental Quotient of 62 which indicated global developmental impairments in all domains.

More specifically, Roman certainly shows very significant weaknesses in receptive and expressive language as he struggles with comprehension, processing, and expressive clarity as well as articulation.

Roman also has major difficulties in personal-social and cognitive abilities as he does not take the time to think things through and also has a major need for consistent supervision and firm structure as well as behavior management strategies as he is often impulsive and out-of-control which interferes with his socialization.

Motor skills may be an area of strength for Roman in terms of gross abilities but Roman displays significant weaknesses in fine-motor skills which will most likely translate to a significant disorder of graphomotor expression as he becomes more challenged with academic tasks.

In summary, Roman's overall performance on the Battelle Developmental Inventory is consistent with global developmental delays seen in children who have Fetal Alcohol Spectrum Disorders.

**VINELAND ADAPTIVE BEHAVIOR SCALES: INTERVIEW EDITION EXPANDED FORM:**

Roman's overall Adaptive Behavior Composite of 60 placed him at a developmental age of 2 years, 3 months with a chronological age of 4 years, 2 months. This is, again, indicative of global developmental delays with Roman showing significant weaknesses in receptive and expressive language in addition to daily living skills and socialization.

Roman is just unable to function without adequate attention, supervision, and firm structure as he is totally dysregulated and disorganized.

Additionally, Roman has major gaps in comprehension, verbal reasoning, and general listening skills

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with very poor oral expressive abilities.

Roman has difficulties with play and leisure time and socialization as he is very impulsive and just does not follow rules and regulations.

Roman displays stronger abilities in gross-motor coordination in comparison to fine-motor skills.

In summary, Roman's overall adaptive abilities are very weak and indicative of global neurodevelopmental impairments.

**AUTISM RATING SCALES:**

Roman is certainly not classically autistic but many children who have multisensory neuropsychological deficits while also coming from a significant background of profound deprivation (early childhood institutionalization) can often be very repetitive, impulsive, with gross ADHD at a very early age.

Roman displayed stereotypic behaviors throughout the evaluation such as hitting his head, rocking, and in constant motion in addition to perseverative speech and language qualities. Roman will also become prone towards gazing and staring in addition to highly impulsive.

Autism rating scales clearly indicated that Roman showed some autistic characteristics typically seen in children who have global neurodevelopmental/neurological impairments related to Fetal Alcohol Spectrum Disorder.

Roman has abnormal relationships due to his impulsivity and aggressiveness and inability to follow instructions and directions. He has a dramatic emotional response as he is moody, irritable, and quite volatile.

Additionally, Roman has global impairments in receptive and expressive language in addition to significant problems in his visual attention and visual perceptual processing. Roman also has gross impairments in his ability to control his activity level in addition to showing definite impairments in all areas of social-reciprocal communication.

Roman also has a developmental history of delays in speech, language, motor, sensory, and behavioral control which are all hallmark characteristics in children who may have a degree of Pervasive Developmental Disorder/post-institutional autistic characteristics.

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**ATTENTION SPAN, CONCENTRATION, AND LEVEL OF HYPERACTIVITY:**

Roman was grossly hyperactive and impulsive as well as inattentive throughout the entire evaluation. Roman has been seen by his Developmental Pediatrician, Dr. Aiello, who felt strongly that he had ADHD and required medication interventions and trials which did not yield significant positive results.

Parents filled out an updated Conners' Rating Scales which indicates very severe ADHD patterns in addition to global developmental delays:

Conduct Disorder	T-score = 85
Anxious-Shy	T-score = 81
Restless-Disorganized	T-score = 84
Learning Problems	T-score = 74
Psychosomatic	T-score = 68
Obsessive-Compulsive	T-score = 77
Antisocial	T-score = 85
Hyperactive-Immature	T-score = 90

**NOTE: T-Scores above 65 = clinical problems**

It is clear that Roman is grossly hyperactive and impulsive in addition to inattentive to the point where he is non-functional. He is unable to control his impulses, urges, and aggressive outbursts in addition to being very immature and child-like. Roman also engages in self-stimulating behaviors such as sucking his fingers and thumbs in addition to gazing and staring with definite problems in his sleep cycle.

Roman's performance on the cross-validating Attention Deficit Hyperactivity Disorder Test yields a score of 130 which indicates the most severe level of ADHD which is definitely neurologically based. Roman shows consistent patterns of hyperactivity, impulsivity, and general disorganization to where he is just unable to control himself. Roman is very poor in his attention and concentration which interferes with overall work habits.

Parents also report overlapping conduct and emotional problems as Roman is unable to follow instructions and directions due to extremely poor judgement and virtually no impulse control. Roman is often aggressive, destructive, and unmanageable to where he is on the go constantly and requires 24-hour supervision.

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**FINE- AND GROSS-MOTOR COORDINATION/SENSORY PERCEPTUAL ABILITIES:**

There is no question that Roman displays motor and sensory dyspraxias. Roman is clumsy and awkward in his smooth muscle coordination, bilaterally with an almost palsy-type approach to dealing with paper and pencil output tasks.

Additionally, Roman shows sensory integration dysfunction as he has major difficulties in his vestibular and proprioceptive abilities. Roman is sensory defensive and other times sensory over-reactive to where he is just unable to process or organize stimuli.

In summary, Roman displays "soft neuropsychological signs" typically seen in children who have global developmental delays related to Fetal Alcohol Spectrum Disorders.

**VISUAL-SPATIAL/PERCEPTUAL MOTOR FUNCTIONING:**

Roman displays severe impairments in motor and non-motor based visual perceptual processing. He struggles in all areas of visual discrimination, visual-spatial relations, visual figure ground, in addition to visual-motor integration.

Roman is totally dysgraphic as he is just unable to copy even simple lines and shapes. He is certainly impulsive but it is clear that he has very prominent palsy-type patterns affecting paper and pencil output which will, in turn affect all learning aptitudes and abilities as he enters kindergarten and subsequent elementary school years.

**RECEPTIVE AND EXPRESSIVE LANGUAGE:**

Roman has been evaluated as having speech and language delays but it is very clear that he has a prominent speech and, primarily, linguistic disorder which is directly related to brain dysfunction seen in Fetal Alcohol Spectrum Disorders.

In reviewing Roman's overall speech and language abilities, his performance on the Preschool Language Scale-Fourth and comprehensive Test of Language Development-Primary: Third Edition indicates a severe mixed receptive-expressive language disorder.

Roman shows confusion and disorganization in his language comprehension/auditory processing. He struggles with simple phonemic awareness and analysis in addition to having major difficulties with verbal reasoning, auditory conceptualization, short-term auditory memory, in addition to general listening skills.

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In terms of oral expressive abilities, Roman shows definite oral motor dysfunction in addition to major impairments in his articulation, word retrieval, and basic semantic-pragmatic-syntactical language. Roman's overall oral language is very disorganized to where he has virtually no understanding of plurals, possessives, and pronouns.

Roman shows autistic language patterns in terms of being rambling, tangential, perseverative, in addition to overly simplistic. He is prone towards substitution errors in addition to major problems with retrieval and severe phonological deficits.

Roman's performance on the Peabody Picture Vocabulary Test and Token Test for Children were all well below average as he was just unable to handle receptive vocabulary or follow even simple one-step instructions and directions.

Roman was confused with identifying colors and shapes due to his significant comprehension deficits although he was extremely impaired in his level of self-control and attention/focus.

#### **DEVELOPMENTAL TASKS FOR KINDERGARTEN READINESS:**

While it is acknowledged that Roman is just at the preschool level, he was administered the Developmental Tasks for Kindergarten Readiness to see if there was any level of strengths. Roman has global impairments in all areas of auditory processing and comprehension, visual memory and visual-motor, in addition to being confused on simple color naming as he is still very inconsistent. Roman has no knowledge or ability to identify numbers and letters. Social interactions are also very impaired due to Roman's level of impulsivity.

#### **MEMORY AND LEARNING:**

Roman shows global impairments in memory and learning on the NEPSY: A Developmental Neuropsychological Assessment in addition to the Test of Auditory-Perceptual Skills - Revised. Roman shows severe impairments in language comprehension and auditory perceptual abilities. For example, he was able to retain and recall only two digits forward but could not even grasp the concept of remembering sentences or a series of words. He was not able to follow basic instructions and directions and was extremely concrete in all areas of logic and reasoning suggesting even further auditory perceptual deficits.

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**NEPSY: A DEVELOPMENTAL NEUROPSYCHOLOGICAL ASSESSMENT:**

Roman displayed global impairments in his frontal lobe-executive functioning which is classic for children who have minimal brain dysfunction/static encephalopathy seen in Fetal Alcohol Spectrum Disorders. Roman had very poor visual attention and organizational skills in addition to planning, sequencing, and memory deficits in all domains.

Roman's language is certainly impaired although he was able to complete body parts naming at an average level but was not able to follow basic instructions and directions or use any simple phonological processing skills.

Roman also displays significant sensory motor and visual perceptual deficits which are "soft neuropsychological signs" seen in children who have global developmental delays.

**PSYCHOLOGICAL FUNCTIONING:**

Roman's overall psychological profile clearly indicates a significant impulse disorder related to frontal lobe-executive dysfunction in addition to an overlapping organic mood disorder typically seen in Fetal Alcohol Spectrum Disorders.

Roman is extremely concrete, primitive, with very low frustration tolerance. He tends to be volatile in addition to confused and disorganized when he is in any type of new or ambiguous situation.

Additionally, due to Roman's quasi-autistic characteristics, he is rigid, inflexible, and just unable to follow basic instructions and directions without ample support and strong limits and structure.

Roman is also a youth who has extreme psychological and cognitive confusion and disorganization which furthers interferes with his overall "attachment potential".

Roman is just unable to self-regulate at any consistent level which, in turn, impacts thinking, reasoning, and overall social-reciprocal relationships. Roman prefers to self-absorbed and preoccupied in his overall thought patterns.



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**INTENSIVE 10-HOUR FAMILY NEUROBEHAVIORAL THERAPY (Nadja Molina, Neurodevelopmental Therapist):**

Roman and family were involved in intensive Applied Behavioral Analysis and verbal behavior therapy. Roman was very out-of-control and parents were totally overwhelmed and acknowledged that he required significant interventional strategies.

Emphasis was on in providing verbal behavior therapy, behavior modification, consistency in parenting, reduction of stimuli, in addition to teaching the importance of safety for Roman's uncontrollable behaviors. Roman is the type of child who requires constant attention and monitoring as he is often out-of-control in addition to having major problems with his overall language and learning which, in turn, further impacts his ability to understand cause and effect thinking.

Parents were made aware that Roman requires a very "concrete and simplistic approach" to overall learning and will benefit by ABA strategies both in home and at school.

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**DIAGNOSTIC IMPRESSIONS:**

- AXIS I**
1. Cognitive Disorder Not Otherwise Specified (Minimal Brain Dysfunction/Static Encephalopathy Related to Moderately Severe Fetal Alcohol Spectrum Disorder)
  2. Severe Mixed Receptive-Expressive Language Disorder (Severe Impairments in Language Comprehension/Auditory Processing in Addition to Oral Expressive Skills, Particularly Semantic-Pragmatic-Syntactical Expression)
  3. Phonological Disorder (Severe Disorder of Articulation)
  4. Learning Disorder Not Otherwise Specified (Severe Motor and Nonmotor Based Visual Perceptual Processing Deficits)
  5. Developmental Motor Coordination Disorder/Delays in Visual-Motor Integration (Significant Visual-Motor Dysgraphia)
  6. Attention Deficit Hyperactivity Disorder Not Otherwise Specified (Severe ADHD Secondary to Minimal Brain Dysfunction/Fetal Alcohol Spectrum Disorder)
  7. Pervasive Developmental Disorder Not Otherwise Specified (Traits/Characteristics Atypical Autistic Behaviors Secondary to Global Developmental Delays)
  8. At Risk— Multiple Learning Disabilities (All Academic Areas)
- AXIS II** Low Average Intellectual Functioning
- AXIS III**
1. Static Encephalopathy
  2. Small Growth Parameters with History of Microcephaly

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**SUMMARY AND RECOMMENDATIONS:**

Roman Alexander Harshaw is a 4 year, 2 month-old special education preschool student who presents with a classic profile of a moderately severe alcohol related neurodevelopmental disorder/Fetal Alcohol Spectrum Disorder. Roman has been evaluated in the past and found to have "ADHD" but his overall neuropsychological profile clearly indicates a more pervasive pattern of multisensory neuropsychological deficits which go well beyond ADHD.

Roman has an area of relative strengths as he shows low average intellectual abilities but has a severe discrepancy between measured intelligence and achievement in all areas, particularly speech, language, motor, sensory, and early academic skills in addition to major impairments in neurobehavioral functioning.

Roman is very impaired in his overall general linguistics as he has major problems in comprehension, verbal reasoning, auditory conceptualization, as well as auditory attention and auditory memory. Roman also displays pronounced impairments in oral motor functioning which interferes with his phonological skills and articulation resulting in a verbal dyspraxia.

Roman also displays multiple motor and sensory dyspraxias as he has severe impairments in both motor and non-motor based visual perceptual processing. Roman displays significant impairments in fine-motor coordination involving paper and pencil output with an almost palsy-like presentation when attempting to complete copying and writing tasks.

Overall neuropsychological testing clearly is supportive of minimal brain dysfunction with significant impairments in frontal lobe-executive skills. Roman is not classically autistic but definitely displays quasi-autistic characteristics as he is impulsive; rigid and inflexible; constantly on the go in a gross hyperactive manner; in addition to being confused, disorganized, with some level of self-stimulating and repetitive patterns of behaviors. It is very common for children with global developmental delays in addition to early childhood institutionalization to continue to present with autistic-type behaviors.

From a psychological perspective, there is no question that Roman shows significant problems with impulsivity and is "at risk" for an organic mood disorder. Roman does not have a great deal of insight or "cause and effect thinking". He has very low frustration tolerance and operates on immediate gratification. He also can be quite volatile and unpredictable, particularly if he is frustrated or is not understanding information processing in both auditory and visual areas.

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The following are treatment recommendations:

1. A copy of Roman's report is being made available to his parents to share with the appropriate school officials for review.
2. Based on the current neuropsychological evaluation, Roman requires "cross-categorization" as a youth who has "multiple handicaps/multiple disabilities/other health impairment (Fetal Alcohol Spectrum Disorder resulting in static encephalopathy/neurological impairments/speech and language impairments/Pervasive Developmental Disorder characteristics)".
3. Roman requires a completely "self-contained" Special Education program for children who have global developmental delays. Roman requires an individual aide as he clearly has major problems with self-regulation in addition to speech and language.

Additionally, in terms of specific Special Education interventions, Roman is a youth "at risk" for global developmental delays and multiple learning disabilities and requires immediate interventional strategies in the following areas:

- A. Speech and language therapy 4-5 hours per week.
  - B. Occupational and sensory integration therapy 4-5 hours a week to address multiple motor and sensory dyspraxias.
  - C. Applied Behavioral Analysis and verbal behavior therapy a minimum of 10 hours per week both at home and in school.
4. Roman would also benefit by ongoing utilization of verbal behavior therapy and ABLES language program (Applied Behavioral Language Education System). This is a necessary interventional approach for a youth who has profound linguistic disabilities.
  5. Roman also requires occupational therapy intervention by a specialist who understands oral motor dysfunction impacting language.
  6. It would be very important that Roman and family receive in-home intensive behavioral therapy which will coordinate with his school program.
  7. It would also be very important for Roman to have a baseline Pediatric Neurological evaluation; to include a 24-hour EEG and possible MRI scan as he clearly meets the full criteria for Fetal Alcohol Spectrum Disorder and is extremely "random and chaotic" in all

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of his movements. It is very important to monitor neurological systems.

8. Roman would also benefit by a pediatric endocrinology consultation to continually monitor his growth parameters which are very small, particularly his head circumference. Roman is making very minimal gains and it is extremely important to monitor growth parameters.
9. The following catalogs may be very beneficial:
  - A. "Lingui Systems" at [www.linguisystems.com](http://www.linguisystems.com).
  - B. "Remedia Publications" (available by calling 1-800-826-4740).
  - C. "Reading Specialist" (available by calling 1-800-776-4332).
  - D. "Reading and Language Arts" (available at [www.linguisystems.com](http://www.linguisystems.com)).
  - E. "Critical Thinking Books and Software" (available by calling 1-800-458-4849 or on the web at [www.criticalthinking.com](http://www.criticalthinking.com)).
  - F. "The Source for Nonverbal Learning Disorders" by Sue Thompson (available by calling 1-800-776-4332).
  - G. "Attainment Company" (available by calling 1-800-327-4269).

All of these books and catalogs have excellent remedial material for children who have global developmental delays, particularly in the areas of language, learning, and early educational tasks (early reading, writing, and math).

10. The material available through Learning Fundamentals at [www.learningfundamentals.com](http://www.learningfundamentals.com) may also be helpful as Roman becomes more stabilized with his attention and impulse control.

It is very important that Roman work on his global developmental delays, speech production, with the understanding that most of his deficits are related to minimal brain dysfunction as the result of Fetal Alcohol Spectrum Disorder.

Parents should contact Learning Fundamentals at 1-800-777-3166 and discuss the current neuropsychological evaluation and which child-friendly CD-ROM/computer programs would be most appropriate.

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11. The following books on Applied Behavioral Analysis and verbal behavior therapy would also be very beneficial:

- A. "Teaching Individuals with Developmental Delays" by Lovaas (ISBN# 0-89079-889-3).
- B. "A Work in Progress: Behavior Management Strategies in a Curriculum for Intensive Behavior Treatment of Autism" by Dr. Ron Leaf.
- C. "Teaching Developmentally Disabled Children" by O. Ivar Lovaas (ISBN# 0-936104-78-3).
- D. "Teaching Children with Autism: Strategies to Enhance Communication and Socialization" by Quill (ISBN# 0-8273-6269-2).
- E. "The New Language of Toys: Teaching Communication Skills to Children with Special Needs" by Schwartz and Miller (ISBN# 0-933149-73-5).

All of these books are available on amazon.com and would be very beneficial for Roman as well as his therapists who are monitoring behavioral management and language therapies.

12. Roman will definitely be a youth "at risk" for multiple and severe learning disabilities as he enters school. He will clearly be at risk for dyslexia based on his general linguistic and visual perceptual deficits as well as problems in graphomotor expression.

Therefore, early intervention services is highly recommended.

13. Parents may wish to research books and research material on Fetal Alcohol Spectrum Disorders.

The book entitled "My FAS Journey" in addition to all of the work on Fetal Alcohol Spectrum Disorders by Dr. Ann Striessgruth would be highly recommended.

14. As this Board Certified Neuropsychologist also has Board Certifications in Advanced Clinical Psychopharmacology, the following recommendations are offered:

Roman has not benefitted greatly by stimulant therapy as he has shown "rebound effects" in addition to increased agitation. This has also occurred with a trial of Zolof.



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Given the severity of Roman's ADHD and his uncontrollable impulsivity and mood changes, a low-dose trial of Risperdal at 0.25 mg a.m. and p.m. would be recommended with an increase (if needed) in increments of 0.25 mg.

Risperdal has a "weight gain side effect" which may be beneficial for Roman.

Avoiding any activating stimulant or antidepressants is recommended at this time as Roman will also show "appetite suppression" if continued with stimulants which will not help his overall growth parameters.

Augmenting the Risperdal (if absolutely needed) with low-dose Clonidine or Tenex at 0.05 mg would be needed although it is hopeful that the Risperdal alone will be very beneficial in managing severe ADHD symptoms in addition to mood agitation and impulsivity.

Medication management can be discussed with Roman's attending pediatrician.

15. Re-evaluation neuropsychologically on an annual basis is recommended.



Ronald S. Federici, Psy.D.

Clinic Director

Clinical Neuropsychologist

Diplomate-American Board of Professional Neuropsychology (ABPN)

Diplomate-American Board of Medical Psychotherapists (ABMP)

Fellow in Advanced Clinical Psychopharmacology (FACAAP)

Diplomate-American Board of Disability Analysts (ABDA)

Fellow-American College of Professional Neuropsychology

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**Intervention Program**

Clinical Director  
Ronald S. Federici, Psy.D.

Name of Patient:

Roman Harshaw

General Manager  
Kathleen R. Tucker

Date of Birth:

April 2, 2002

Clinical Neuropsychology  
Ronald S. Federici, Psy.D.  
William D. Ling, Ph.D.

Dates of Sessions:

June 15 and 16

Neurobehavioral Therapists  
Nadya Mellina, M.Ed.  
Leslie Smith, M.Ed., BCBA

**I. Purpose of Report:** To provide strategies/interventions based on principles of Applied Behavior Analysis that will address Roman's needs.

Early Processing/Speech  
Therapist/Audiologist  
Dr. R. Lucker

**II. Background Information:**

Research Specialist  
Deanna Linville, Ph.D.

Roman Harshaw is a 4 year, 2 month-old special education preschool student who was adopted from a Russian orphanage in February 2004 at the age of 22 months. Roman was evaluated by Dr. Ronald S. Federici, clinical neuropsychologist, on June 14, 2006 (Please see report of neuropsychological evaluation). Dr. Federici concluded that current neuropsychological testing supports a diagnosis of a moderately severe alcohol related neurodevelopmental disorder/Fetal Alcohol Spectrum Disorder given that Roman presents with physical characteristics that are indicative of this disorder (e.g., small growth parameters, microcephaly) in addition to a pervasive pattern of multisensory neuropsychological deficits that go beyond typical ADHD.

Administrative Assistant  
Anyia Shmrbat

Roman has an area of relative strengths as he shows low average intellectual abilities. However, he has a severe discrepancy between measured intelligence and achievement in all areas, specifically speech, language, motor, sensory, and early academic skills in addition to major impairments in neurobehavioral functioning.

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Roman's overall general linguistics is impaired as he has difficulty with comprehension and verbal reasoning as well as auditory conceptualization, attention, and memory. Roman also displays pronounced impairments in oral motor functioning, which interferes with his phonological skills and articulation resulting in verbal dyspraxia.

Email: [DrFederici@aol.com](mailto:DrFederici@aol.com)

[www.DRFEDERICI.com](http://www.DRFEDERICI.com)

Roman also displays multiple motor and sensory dyspraxias as he has severe impairments in both motor and non-motor based visual perceptual processing. He

displays significant impairments in fine motor coordination involving paper and pencil output with an almost palsy-like presentation when attempting to complete copying and writing tasks. Overall neuropsychological testing is supportive of minimal brain dysfunction with significant impairments in frontal lobe executive skills. Roman is not classically autistic but displays quasi-autistic characteristics, which are exemplified by his impulsivity and rigidity/inflexibility in addition to his always being on the go in a gross hyperactive manner, confusion, disorganization, and self-stimulating and repetitive patterns of behaviors. It is very common for children with global developmental delays in addition to early childhood institutionalization to present with autistic-like behaviors; however, Roman does meet the diagnostic criteria of an Autism Spectrum Disorder.

From a psychological perspective, Roman presents with significant difficulty with impulsivity and appears to be at risk for an organic mood disorder. Roman does not have a great deal of insight or insight and effect thinking. He has low frustration tolerance and operates on immediate gratification. He also can be quite volatile and unpredictable, particularly if he is frustrated or is not understanding information processing in both auditory and visual areas.

After the evaluation, Roman and his parents participated in an intensive 10 hour neurobehavioral therapy session with an emphasis in Applied Behavior Analysis with Nadya Molina, M.Ed. During our therapy, Mr. and Mrs. Harshaw shared their concerns, and interventions were suggested.

Mr. and Mrs. Harshaw expressed that Roman exhibits tantrum behaviors that often result in him breaking things and that he often screams and makes loud noises. They want methods/strategies that target Roman's deficits related to the Fetal Alcohol Syndrome. They wish to set him up for success while making their lives less stressful without feeling they are shortchanging the other children in the home.

I really enjoyed working with Roman and his parents during our neurobehavioral therapy sessions.

Roman presents with difficulties in the areas of speech-language and fine motor as well as impulsivity, organization, self-stimulating/repetitive behaviors, and self-control. As such, Roman needs structure, clear boundaries, expectations, and consequences to address his problem behaviors in addition to activities/programs that address his speech-language and fine motor needs.

### III. Suggested Strategies/Interventions to Address Physiological Needs:

- A. An assessment done by an occupational therapist is recommended to address motor and sensory dyspraxias and fine motor impairments.
- B. Roman can benefit from objects that regulate sensory stimulation (i.e., gel balls, koosh balls, etc.). These objects can be found in the Abilitations catalog, <http://www.abilitations.com>. To assist with auditory stimulation and processing skills, a program such as Earobics could be beneficial.

- C. Roman can benefit from activities to develop/increase fine motor skills such as Theraputty. (See list of activities attached.)

#### IV. Suggested Strategies/Interventions to Address Social Needs:

- D. A daily schedule or sequence of events should be used to increase predictability of tasks and activities and to increase structure at home. When creating a schedule, the activities should be arranged to have a preferred activity at the beginning and at the end with a non-preferred activity in between. This should help in making the activities more appealing to Roman and might decrease the behaviors of concern. A reinforcer or break (depending on needs) is recommended at the end of 2-3 activities. (See sample of schedule attached.)
- E. Roman needs clear and concise directions, rules, and consequences. Instructions/directions must be presented to him in sentences no longer than 4-5 words. For example, "Roman, pick up your shoes". Try to eliminate emotions and lectures. He might miss the meaning of a sentence if it is too long or too complicated to organize and process. (See Rules attached)
- F. Use social skills training:
- Define the skill (e.g., Touching Electronics and Drawers, Sharing, etc.)
  - Model the skill
  - Role-Play
  - Parent rehearses with Roman (puppets can be used during this step)
  - Roman rehearses with parent or peer (puppets can be used during this step)
  - Reinforce skill
- G. Use social stories to develop/increase social skills (i.e., introduce a new situation, or reinforce appropriate social behaviors). This strategy is designed to describe social situations in terms of relevant social cues and to define appropriate responses. It will help Roman understand situations that can cause anxiety, frustration, etc., and how to respond appropriately to them. Examples of skills that should be taught through social stories are: Do Not Touch Electronics or Drawers, Sharing, Do Not Poop/Pee in the Bathtub, Sharing/Taking Turns, etc. (See social stories attached.)
- H. "Back to Basics" - Decrease the amount of stimuli in the environment and decrease the amount of time in front of a glowing box (i.e., TV, video game, computer, etc.). Use Time-Scout Monitor (<http://www.time-scout.com/products/index.php>) or Token TV (<http://www.tokenTV.com/>) to monitor the time in front of a glowing box.

#### V. Suggested Strategies/Interventions to Address Behavioral Needs:

- I. Ignore and redirect behaviors that occur to obtain attention. When working with Roman, it was clear that one of the functions of his behaviors is to obtain attention. These behaviors must be ignored and redirected in order to be extinguished. Giving attention to these behaviors is going to make them stronger. Redirect these behaviors to a more appropriate one and don't provide attention to the problem behavior. If Roman is



touching something to obtain attention, redirect him to an object that he is allowed to touch or to a more appropriate action (i.e., drawing).

- J. "Catch him being good". Reinforce Roman every time you see him following directions, sitting down, doing work, etc. Give him attention when he is doing something good to reinforce these behaviors.

- K. Do not remove demands or tasks when Roman expresses himself using unwanted behaviors. Ignore and redirect to task at hand after a demand has been placed. The removal of these demands immediately after the challenging behavior occurs makes the behavior stronger. In order to put the challenging behavior in extinction, we can't remove the demand immediately after the behaviors occur.

- L. Use the phrase, "First \_\_\_\_\_, then \_\_\_\_\_"; to let him know that the reinforcers follows the task.

- M. Roman exhibits behaviors that are caused by internal stimulation. These behaviors (i.e., noises) are self-stimulatory and come up when Roman needs extra stimuli. When these behaviors appear, they must be redirected and replaced with behaviors that are more appropriate and that can eventually be more reinforcing. For example, if he is making a high pitch noise, reshape that behavior with a more appropriate noise (i.e., song).

#### N. Procedures for 3-Step Guided Compliance

Three-step guided compliance should be used to address noncompliant behaviors. This procedure involves using least to most prompting. First, Roman is given a verbal prompt (i.e., "Go sit down"). If he doesn't initiate the task within 10-15 seconds, a gestural prompt plus a verbal prompt is given (i.e., "Go sit down" + pointing in the direction of the chair or carpet square). If the task is not initiated within 10-15 seconds, a verbal prompt and the least amount of physical guidance is used to have Roman comply with the task.

The goal of using this procedure is to teach/train Roman to respond before the physical guidance. Over time it will be clear to Roman that he will be required to do the task and may decide to cooperate on his own. It is important to know that Roman should not be praised when he completes the task after using the three-step guided compliance. He is not "doing a good job." The adult is guiding him to do what he was requested to do and had refused to do in the first place. Roman should be praised when he is complying with an adult's directions using a verbal or visual prompt.

- O. Use Sequence One and Sequence Two holds when Roman is being destructive, screaming, or a parent can no longer ignore him. You can find this information from the book *Help for the Hopeless Child*, by Dr. Ronald S. Federici.

- P. Use a program such as *1-2-3 Magic* to deal with behaviors at home. A video and book explaining the program are available at [www.thomasphehan.com](http://www.thomasphehan.com) or 800-635-8301. I recommend the video over the book.

- **Procedures for *1-2-3 Magic***

- *1-2-3 Magic* should be used to stop unwanted behaviors and to avoid the use of unnecessary words (i.e., talk, persuade, show emotions, etc.). This procedure involves the use of the least amount of prompting and attention provided to the child and helps the adult to control his/her emotions. When Roman shows unwanted behavior, the adult will approach him and say: "That's one." If the child persists with the unwanted behavior, the adult will say: "That's two." Again, if the child doesn't stop the unwanted behavior, the adult will say: "That's 3, take 5." "Take 5" means that the child is taking 5 minutes of Time Out time in (Do not leave Roman alone, the parents should stay within 3 - 6 feet of him). The goal of using this procedure is to teach/train the child to respond before going to time out, without giving extra attention (i.e., talk, persuade, show emotions, etc.). Over time, it will be clear to Roman that he will be required to stop the unwanted behavior immediately, when requested by an adult. It is important to use the correct procedure for time out and to remember that only the recommended verbal prompts (i.e., "that's 1-2-3, take 5") should be used.

- **Procedures for Time Out (A brief period of social isolation during which the child cannot receive attention or earn rewards):**

- Have a certain area (i.e., chair and desk) set up for T.O. This area should be away from any type of social interaction and away from any object(s) or item(s) that can be reached by the child.
- Use a timer, usually 1 minute per year (e.g., 5 year old = 5 minutes).
- There should be no social interaction during T.O. Verbal interaction and eye contact should not be given at this time. This is not the time to review rules or discuss inappropriate behavior.
- Do not leave Roman alone. The parents should stay within 3 - 6 feet of him.

- Q. A program based in Applied Behavior Analysis/Verbal Behavior is recommended. The family must work with a consultant that can complete an ABLLS, design, and supervise the program.

When implementing a behavior management plan, we need to keep in mind: Consistency across subjects and settings. We also need to remember that in most cases, the behavior gets worse before it gets better (i.e., extinction burst). Given that unwanted behaviors have been shaped and reinforced for months/years, it takes time to decrease/eliminate unwanted behaviors and teach alternative/replacement behaviors. If the interventions are effective, keep using them until the behaviors are under control. Start fading the interventions little by little and keep collecting data. This will allow you to see and analyze outcomes of the fading to make sure that you are not increasing the unwanted behavior(s).

I am available to provide further consultation and information. Please do not hesitate to request additional assistance.

*C. M. Molina, MEd*

Crystal M. Molina, MEd  
Neurobehavioral Therapist